EPA
United States
Environmental Protection
Agency

Clean School Bus USA

A Partnership to Reduce Pollution from School Buses

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March 22, 2005

Presentation Overview

- The Background and Goals of CSB USA
- Accomplishments thus far
- Demonstration Project Update and Results
- Targeting the Future

Clean School Bus USA Goal:
Tomorrow's Buses for Today's Children

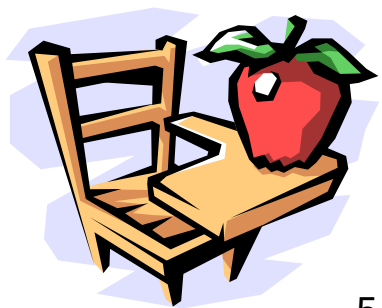
- Clean School Bus USA is a partnership of public and private sector leaders
- Launched in April 2003 to provide cleanest possible transportation for this generation of school children by:
  - Reducing school bus idling & reinforcing smart driving practices
  - Retrofitting buses with modern pollution control technology
  - Replacing the oldest buses with new, cleaner buses
- The goal: modernize 100% of the fleet by 2010
- The benefits: healthier kids and communities

Why Focus on School Buses?

- **School buses are very safe but we can do better:**
  - Many are very old with rudimentary or no emission controls
  - Almost 400,000 are diesel-powered
- **24 million children in the U.S. ride school buses**
- **Diesel exhaust presents a significant public health risk**
  - PM concentrations can be higher inside the bus than outside
  - Children breathe 50% more air per pound of body weight than adults
- **2004 & 2007 HD standards only apply to new engines**
  - Today's kindergartners will be in college before school bus fleet turns over

The Strategies Available: Learn the Three "R's"

- **Reduce Idling and Reinforce Smart Driving Practices**
  - Smart, easy, and immediate way to reduce pollution
  - Saves fuel and money
  - All school districts can participate
- **Retrofit Buses**
  - Can achieve significant reductions in particulate matter emissions (as much as 90%)
- **Replace Buses**
  - Replacing old buses delivers important safety as well as health benefits



Reduce Idling & Reinforce Smart Driving Practices

- **Reduce Idling**
  - Train drivers with EPA's new anti-idling video
  - Power flashing lights with the battery, not the engine
  - In cold weather, warm the engine using block heaters and provide a room inside the school where drivers can wait
  - In warm weather, provide air conditioned waiting room for drivers

Reduce Idling & Reinforce Smart Driving Practices

- **Reinforce Smart Driving Practices**
  - Establish anti-caravanning policies
    - Don't follow closely behind other diesel vehicles especially if there is visible smoke
  - Ensure good maintenance of fleet
  - Plan routes to reduce diesel exhaust exposure

Retrofit

- **A Retrofit can be**

  any change to an engine system above and beyond what is required by EPA regulations that improves the engine's emission performance:
  - Catalyst or filter
  - Engine upgrade
  - Early engine replacement
  - Use of cleaner fuels
  - Idling control equipment
  - Combination of above

- **EPA's Retrofit web site maintains a list of manufacturers and verified technology**
- **Calif. Air Resources Board and EPA have new MOU so CARB-verified technology available for CSBUSA projects**

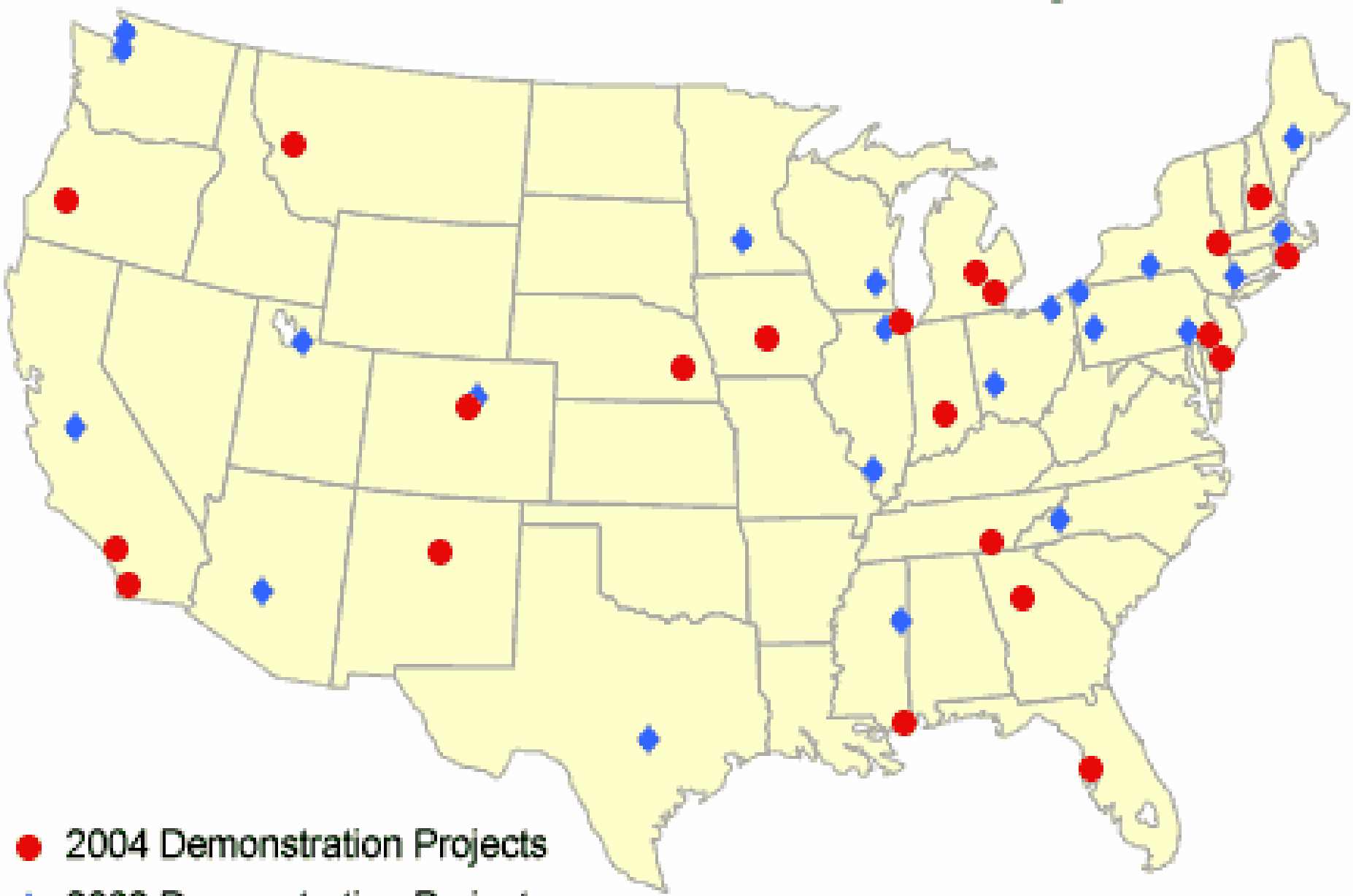
Replacement Options

- Cleaner Diesel, Compressed Natural Gas (CNG) and Propane offer very low emissions
- In addition, replacement buses offer new safety features.
- Replacement engines are also an option.

Clean School Bus USA Supports 37 Demonstration Grant Projects

- Congress provided $5 million in 2003 (17) and in 2004 (20) for demonstration project grants
- EPA held competition for grant funds
- EPA received an overwhelming response to 2003 solicitation:
  - 120 applications, 113 eligible
  - Requests totaled almost $60 million
  - Match offered totaled more than $36 million
  - Requests ranged in size from $2,000 to $2 million
  - Average request was $480,000
  - Applications from 36 states + Puerto Rico
  - Applicants included school districts, state/local agencies, regional air agencies, nonprofits and national organizations

Clean School Bus Projects



A Mix of Approaches. . .

- **Various technologies:**
  - PM filters + ULSD, catalysts, compressed natural gas, diesel emulsion, and biodiesel
- **Diverse mix of settings**
  - Small rural locations to large metropolitan school districts
- **Common factors:**
  - Commitment to making project successful
  - Leadership at many levels
  - Flexibility and patience

A Variety of Partners. . .

- Network of public and private stakeholders that supports school districts
  - NAPT
  - NSTA
  - NASDPTS
  - Environmental & health organizations
  - Educational organizations
  - Industry
  - State and local government
- Clean School Bus Coalition

The Results as of Last Year for our CSBUSA projects. . . .

- Over 500,000 students were riding on cleaner buses at the end of last year!
- As of January 2005, 12 projects completed.
  - 1206 buses had retrofit technologies installed
  - Over 4200 additional buses are using clean fuels
  - 10 buses were replaced
  - At least 70 districts are implementing idle reduction programs
- Clean School Bus USA grants just awarded in 2003 will ultimately impact ~5,000 buses

Lessons Learned from Current Demonstration Projects

- Partnerships are critical for successful projects
  - Work early to identify matching funds & key school administration contacts
  - Work early with regional fuel and technology suppliers
- Know your bus fleet and operational schedules in advance
  - Internal & external forces can drive project schedule if not initially in-sync with fleet operations
  - Technology availability and applicability
  - Compile records of vehicle & engine models, ages, annual mileage & fuel usage, fleet size, student ridership.

Clean School Bus USA Past Grant Criteria

- Evaluation Criterion for 2003 & 2004 Awards
  - Replicable for other school districts
  - Sustainable projects showing lasting environmental benefits'
  - Demonstrate a commitment to reduce pollution in other ways
  - Financial cost-sharing is reasonable
  - Knowledge of Fleet & Operations
- Other Considerations were
  - Geographic Equity throughout US
  - Air Quality – Local AQ problems or nonattainment concerns
  - Environmental Justice
  - Technology Diversity
  - Ridership – average length of bus ride & # of students on buses
  - Partners

Funding Sources for Clean School Bus USA Projects

- **Federal**
  - EPA: $5M each year FY03-04, plus Regional funding. $7.5 M in 05. Proposed President's 06 budget has $10 M
  - Dept of Energy Clean Cities
  - Dept of Transportation CMAQ funds – Nonattainment Areas
- **State**
  - New York - $5M/yr for school bus retrofit
  - Texas - $130M/yr for retrofits over the next 3 yrs
  - California – ($61M secured this year)
    - Approx $70M made available 98-03
  - Washington - $5M/yr for school bus retrofits over the next 5 yrs
- **Supplemental Environmental Projects (SEPs)**
  - Federal settlements (Toyota - $20M)
  - State settlements
    - Ohio – OEPA in Cleveland Area - $60,000
- **Local funds**
- **Corporate sponsorship**

Applying for 05 CSBUSA Funds

- Official solicitation announcement for the $7.5 Million will be posted in the spring of 2005 at

  http://www.epa.gov/otaq/schoolbus/funding.htm
- School districts (and federally recognized tribes which operate schools) only are eligible for this solicitation
- Funds will be for: retrofitting; replacing buses and/or engines (a portion of the cost); and, switching to cleaner fuels.

Applying for Funds: Getting Started EARLY

- Assemble your team (internal & external - transportation/technology, administrative, organization support)
- Get support from state or local contacts
  - Includes insight & pointers on project, letters of support
- Talk w/ vendors about appropriate technologies for fleet
  - Fleet Assessment information may be useful to vendors as well

Applying for Funds: Showing Your Successes….

- Develop a track record. Document your successes with:
  - Idle reduction & smart operating practices
  - Cleaner fuels
  - Driver training to reduce emissions
  - Fleet maintenance
  - Other school-based environmental health &/or stewardship programs, including IAQ Tools for Schools
- Consider how you will contribute
  - Learn about allowable matches (www.grants/gov)
  - Identify local resources that might be used as a match, such as state/local funds or private sector contributions
  - Line up matching contribution early, as it may take time in budget cycle.

Applying for Funds: Start Early & Be Thorough!

- Start preparing written description of the program you would like to implement early in the process.
  - Be specific & thorough (for grant & for potential partners)
  - Describe how you will communicate results to community & agency
  - Get feedback on basic write-up
  - Focus your proposal on results – purchasing hardware or activities that result in emission reductions (not administrative overhead)
- Get letters of support from partners
- Read Request for Proposal carefully & follow instructions <u>exactly</u>
  - Answer criteria fully and in order. Fine tune project to match as many of criteria as possible. General narrative may not address specific criteria. Include realistic budget and timeframe.
  - Don't assume reviewers know about anything you don't tell them
    - Take credit for things you are doing
    - Demonstrate that you can accomplish program that you are proposing

Available Education and Outreach Resources

- Clean School Bus USA offers free public information materials
  - Brochures
  - Five-minute anti-idling video
  - Book marks
    - Available free from 1-800-490-9198
- Visit EPA's Clean School Bus USA website for additional information:
  - Anti-idling
  - Links to specific projects across the country
  - Funding Updates and future grant announcements
  - Ordering and downloading materials

Tomorrow's engines for today's children can be a reality!

- **Partnerships are key.**
- **Leaders come from every sector.**
- **You can make the difference.**
- **For further information talk to us at the workshop today or visit:**
  www.epa.gov/cleanschoolbus
  www.epa/gov/otaq/retrofit